

We Claim:

1. A method for providing a proxy service in a computer network, comprising the steps of:

- (a) receiving a request to access a device,
- (b) determining the path to the device,
- (c) ascertaining what firewall rules exist for that given path, and
- (d) redirecting the client to the appropriate proxy, if any is needed, for that path.

2. The method of claim 1 wherein the ascertaining step comprises the step of using a network inventory to describe the devices that are to be considered by the proxy.

3. The method of claim 1 wherein the ascertaining step comprises the step of using device attributes apart from the native device IP address to select the device.

4. The method of claim 1 wherein the ascertaining step comprises the step of using an inventory of devices to distinguish devices that have IP numbering or network conflicts.

5. The method of claim 1 wherein the ascertaining step comprises the step of using physical topology information to determine the location of a device.

6. The method of claim 1 wherein the ascertaining step comprises the step of using physical

topology information to determine and discriminate between non-routable networks with conflicting address information.

7. The method of claim 1 wherein the ascertaining step comprises the step of using physical topology information to determine and discriminate between non-routable networks with conflicting address information.

8. The method of claim 1 further including propagating path information to proxies.

9. The method of claim 1 further including authenticating for the client.

10. The method of claim 1 further including authenticating between proxies.

11. The method of claim 1 further including informing the remote proxy server of the client address.

12. The method of claim 1 further including informing the remote proxy server of the destination address.

13. The method of claim 1 further including determining the remaining path to be traversed for a given proxy.

14. The method of claim 1 further including a means o making proxy paths recursive.

15. The method of claim 1 further including creating a communications channel between proxies.

16. The method of claim 1 further including having an HTTP protocol request go from the client to the destination.

17. The method of claim 1 further including having an HTTP protocol response go from the destination to the client.

18. The method of claim 1 wherein when the service is performed, appear to the destination as coming from the source.

19. The method of claim 16 further including maintaining authentication between client and proxy after the HTTP request has completed.

20. The method of claim 17 further including maintaining authentication between proxies after the HTTP request has completed.

21. The method of claim 1 further including creating a communications channel between proxies.

22. The method of claim 1 further including having a TCP request go from the client to the destination.

23. The method of claim 1 further including having a TCP response go from the destination to the client.

24. The method of claim 1 wherein when the service is performed, appear to the destination as coming from the source.

25. The method of claim 22 further including maintaining authentication between client and proxy after the TCP request has completed.

26. The method of claim 23 further including maintaining authentication between proxies after the TCP request has completed.